

WHAT IS CLAIMED IS:

1. A self-locking connecting device, comprising:

5 a body member defining at least one connecting element, adapted for pivotal association with at least one member; and

at least one locking connector element defined in said body member adapted for locking the device to said at least one member.

10 2. The device of claim 1 wherein said at least one locking connector and connecting elements are defined in said body member at opposite ends thereof.

15 3. The device of claim 1 wherein said at least one locking connector element comprises at least one aperture defined in said body member at a first portion.

20 4. The device of claim 3 wherein said at least one locking connector element further includes at least one concavity portion defined in said body member proximate said aperture.

5. The device of claim 3 wherein said at least one locking connector element further includes at least one concave engaging portion defined in said body member.

25 6. The device of claim 5 wherein said at least one concave engaging portion is defined in said body member at a second portion.

7. The device of claim 1 further comprising at least one guide slot defined in said body member.

30 8. The device of claim 7 further comprising at least one extended portion, joined to and integral with said body member at a first portion.

9. The device of claim 1 wherein said at least one connecting element comprises at least one

pivot aperture defined in said body member at a first portion.

10. The device of claim 1 further comprising at least one connecting aperture defined in said body member at a second portion.

5 11. The device of claim 10 including at least one securing aperture defined in said body member and operably associated with said at least one connecting aperture.

10 12. A self-locking device for pivotally connecting first and second members, comprising:

15 a body member defining a pivot aperture pivotally associated with the first member; and a locking connector element defined in said body member for securing the device and the second member in a first position.

13. The device of claim 12 wherein said pivot aperture and locking connector element are defined in said body member at opposite ends thereof.

20 14. The device of claim 12 further comprising a U-shaped portion defining a slot, whereby said slot operably receives the first member in said first position.

25 15. The device of claim 14 including two extended portions joined to and integral with said body member at a first portion.

30 16. The device of claim 15 wherein said locking connector element is an aperture defined in each of said two extended portions, aligned and operably associated with a retaining device operably associated with the first member, whereby said retaining device operably engages said apertures when the device and the second member are in said first position.

35 17. The device of claim 16 wherein said retaining device comprises a detent element operably

associated with the first member and in positional relationship with said apertures.

18. The device of claim 16 wherein said locking connector element includes a concavity portion defined in each of said two extended portions proximate said apertures, whereby the retaining device may be accessed when the retaining device engages said aperture.

19. The device of claim 18 wherein said locking connector element further includes two concave engaging portions defined in said body member at a second portion, proximate, and on opposing portions of, said guiding slot.

20. The device of claim 19 wherein said pivot aperture is defined in each of said extended portions and operably engages a pivot device operably associated with the first member.

21. The device of claim 20 wherein said pivot device comprises an axial rivet operably associated with the first member and in positional relationship with said pivot apertures.

22. The device of claim 21 further defining at least one connecting aperture in said body member, whereby the second member is secured to the device.

23. The device of claim 22 including at least one securing aperture defined in said body member in fluid communication with said at least one connecting aperture and operably associated with a securing device, whereby the second member is secured to the device by said securing device.

24. The device of claim 23 wherein the first member comprises a handle.

25. The device of claim 24 wherein the second member comprises a work piece.

26. The device of claim 24 wherein the second member comprises a catch device.

27. The device of claim 26 wherein the second member comprises a net assembly.

5 28. A self-locking device for pivotally connecting a first and second member, comprising:

a body member defining a pivot aperture pivotally associated with the second member; and

10 a locking connector element defined in said body member for securing the second member in both an extended and retracted position.

29. The device of claim 28 wherein said body member defines a slot, whereby said slot operably receives the second member.

15 30. The device of claim 29 further comprising two extended portions, joined to and integral with said body member.

20 31. The device of claim 30 wherein said locking connector element comprises a pair of apertures defined in each of said two extended portions in spaced relationship to each other, and said apertures are aligned and operably associated with a retaining device associated with the second member, whereby said retaining device operably engages said apertures.

25 32. The device of claim 31 wherein said retaining device comprises a detent device operably associated with the second member and in positional relationship with said apertures.

30 33. The device of claim 32 wherein said locking connector element further includes a concavity portion defined in each of said two extended portions proximate said apertures, whereby the retractable retaining device may be accessed when it operably engages said apertures.

34. The device of claim 31 wherein said connecting element includes a pivot aperture defined in said body member in each of said extended portions operably engaging a pivot device operably associated with the second member.

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35. The device of claim 34 wherein said pivot device comprises an axial rivet operably associated with the second member and in positional relationship with said pivot apertures.

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36. The device of claim 35 further including one connecting aperture defined in said body member, whereby the first member is secured to the device.

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37. The device of claim 36 further including at least two securing apertures defined in said body member in fluid communication with said connecting aperture and each said securing aperture is operably associated with a securing device, whereby the first member is secured to the device.

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38. The device of claim 37 wherein the first member comprises a handle.

39. The device of claim 38 wherein the second member comprises a pivoting support element.

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40. A self-locking pivotal connector pivotally connecting first and second members for pivoting between a first extended orientation and a second folded orientation, comprising:

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a body connected to the second member;
a pivot member connected to the body and to the first member and pivotally connecting the body to the first member;

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a disengageable locking member connected to the body and to the first member and selectively locking the body to the first member to prevent pivoting of the body relative to the first member about the pivot member; and

5 a stop connected to the body and engageable with the first member preventing pivoting of the body relative to the first member in a first direction about the pivot member, while allowing pivoting of the body relative to the first member in a second direction about the pivot member.

10 41. The connector of claim 40, in which the pivot member and locking member are connected to the body at spaced locations.

15 42. The connector of claim 40, in which the locking member includes at least one locking bore defined in the body.

15 43. The connector of claim 42, in which the locking member includes at least one compressible locking pin connected to the first member and biased to extend outwardly from the first member.

20 44. The connector of claim 43, in which the body includes at least one concave depression communicating with the locking bore to provide manual access to the locking pin.

25 45. The connector of claim 40, in which the pivot member includes at least one pivot aperture defined in the body.

25 46. The connector of claim 45, in which the pivot member includes at least one pivot pin connected to the first member and pivotally engaging the pivot aperture of the body.

30 47. The connector of claim 43, in which said body includes at least one cam surface for engaging the locking pin as the first and second members pivot from the second folded orientation to the first extended orientation.

48. The connector of claim 47, in which the cam surface depresses the locking pin.

49. The connector of claim 48, in which the body includes wings joined by a bridge portion to define a U-shaped slot.

5 50. The connector of claim 49, in which the first member is pivotally disposed in the slot.

51. The connector of claim 50, in which the cam surface adjoins the slot.

52. The connector of claim 49, in which the stop is connected to the bridge portion.

10 53. The connector of claim 40, in which the first member is a hollow tube having a side wall that engages the stop, and having an opposite side wall including a slot sized to receive the stop therethrough without interference.

15 54. The connector of claim 53, in which the stop is connected to the bridge portion.